

Subject Discipline, Age and Gender Differences in Use of Library among Nigerian University Undergraduates

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The study sought to determine whether there were subject discipline, age and gender differences in undergraduates' use of the library. A multi-group cross-sectional design was employed. Participants were 362 undergraduates in subject disciplines of Arts, Education, Law, Social Sciences, Pharmaceutical Science, and Veterinary Medicine in four universities in eastern Nigeria. Participants were aged 18-32 years, with a mean age of 25 years. The Library Utilization Questionnaire developed by the researchers was administered on the participants to assess their use of the library. ANOVA results showed that participants did not differ significantly in use of the library on the basis of subject discipline, age, or gender. However, there was significant interaction effect of subject discipline and age on use of the library, $F(2, 338) = 2.61, p = .03$: use of the library increased with older age for undergraduates in Arts and Veterinary Medicine, whereas it decreased with older age for those in Law and Social Sciences. The effect size (eta squared) of this interaction effect was however relatively small (.04). It was concluded that the primary interest of majority of older undergraduates in Law and Social Sciences might be status advancement rather than quest for knowledge.

Students who study in colleges and other tertiary institutions are usually expected to have notes on lectures they had. Such notes are very necessary for rehearsing of already learned material and re-appraisal of information hitherto overlooked. The notes are however not usually considered adequate. Lecturers therefore emphasize use of materials in the library to enhance and expand on the subjects discussed.

A library is a collection of books, journals, electronic media, and other forms of knowledge-based publications arranged for use and stored in a building which symbolizes the elevation of human mind, as accomplished through learning (Ehonyotan & Agada, 2006). A library, Aguo1u (1989) noted, is a collection of records of human culture in diverse formats and languages preserved, organized and interpreted to meet a broad variety of needs of an individual for information, knowledge, recreation and aesthetics. Contemporary library holdings basically exist as print (printed books, journals, monographs, etc.) and electronic resources (CDroms, intra net and internet that hold e-books, e-journals, etc.); with print resources having existed for a longer time but electronic

resources gradually growing in usage for more than a decade now (Dillon & Hahn, 2002; Seeds, 2002; Tenopir, 2003), probably due to their enhanced usage convenience, time efficiency, and accessibility as well as maintenance (Tenopir, 2003). Tenopir noted that electronic resources of the library are accessible even from the home and when the physical library is not open.

Tenopir (2003) noted that although digital (electronic) resources can be accessed on the internet on individual basis outside of the library, the electronic subscriptions subsidized by the library and on the internet still give the library an advantage over individual subscriptions. Tenopir noted that much of the materials obtained by students through non-library related surfing on the internet do not match their teachers' criteria for quality. Moreover, a lot of undergraduates in Nigerian universities are unlikely to have enough financial resources to make individual subscriptions for most of the required information resources necessary for adequate scholarship. The need for them to use the library facilities is therefore imperative.

A broad concept of use of the library was adopted in this study, and includes use of print and electronic as well as any other resources of the library utilized by the undergraduate, which could include studying in the library with library's or own books, using the library's -electronic resources, checking books out; even for socializing and to sleep (Waldman, 2003).

Much of the literature that is important for scholarship, research, and for scientific and technological developments are usually accessible in the library or could be accessed more easily with the facilities of the library for information search. A lot of undergraduates however seem to make use of the library sparingly; they rather prefer the lecture notes dictated by their lecturers (Haynie, 2006). Lecture notes come in form of material that the lecturer or teacher dictates, what the teacher says and does during the hours of teaching or lecturing. Most times, some monographs in form of printed or photocopied material are read and handed over to the students to serve as guide. Their items are usually very brief and mostly the main content of the course, with little or no detailed explanation. Lecture notes are supposed to serve as guide to students who are to go into the library for expansion of the subjects, and subsequent reduction in their knowledge gap (Rose, Rolheiser, & Hogaboam, 1998). The further use of the library is considered necessary for the capacity of knowledge sought in the higher institution. Many of such students that make minimal use of the storehouse of knowledge, the library, are unlikely to avail themselves with adequate knowledge of the subjects which the universities are known for.

Observation of academic activities in many Nigerian universities show that some lecturers seem to reinforce dependence on lecture notes when they instruct that during examination students should give back to them what they gave the students in the class. This likely reinforcement of dependence on lecture notes may lead to decline in use of the library among undergraduates. Grolnick and Slowiaczek (1994) suggest that achievement motivation and school performance do correlate with reward system among the parents and the lecturers. Bandura (1965) believes that youths are more likely to imitate a model

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whose behaviour they see reinforced. For instance, they are more likely to imitate a senior whom they saw make good grades using the lecture notes than when they see that behaviour of the model being punished - obtain lower grades. The same applies to cases involving use of other sources of information on the course content that are available in the library. Undergraduates' neglect of the library and converse dependency on lecture notes may stem from the reinforcement and expectancy value on such behaviour.

Raynor, Entin and Brown (1982) developed the general expectancy value theory which focuses on the interplay of the motive to achieve success and motive to avoid failure as they interact with expectancy (subjective probability) of success or failure and the incentive value of the goal to be achieved. The general expectancy value theory (Raynor et al., 1982) attempts to predict behaviour in achievement-oriented situations. It has been applied to achievement behaviour of college students (Singer, Stancy, & Large, 1993) and children (Pekrun, 1993) as well as to an understanding of how goals are developed. According to this theory, one can determine the likelihood that a person will enter an achievement-oriented situation. According to Smith (1998), people can predict the likelihood that they will be successful if they can accurately measure four things: the strength of the motive to achieve success; the strength of the motive to avoid failure; the subjective belief that success or failure will occur in a situation; and the perceived value of the goal to be achieved.

Therefore, information seeking by undergraduates is to identify a message that satisfies a perceived information need. This is actively or passively done to satisfy felt need, usually acquisition of competence in knowledge and particular skills.

The contemporary human society and employers of labour seem to place emphasis on the grades and class of certificate of the graduating students, which is assumed to reflect their performing ability. Although the employers of labour conduct employment examination and interviews to determine the level of competence of the applicants, the class of degree or grade scores from the university serve as prerequisite qualification for those examinations. In most recruitment advertisements, grades or class of certificate is usually spelt out as a critical sieve criterion for candidates (Lock, Shaw, Saari, & Latham, 1981). The grades however depend on mastering of course content in which a lot of the lecturers in the university believe would be obtained through lectures and notes made during the lectures and expanded with materials sourced from other sources, especially through the library. Haynie (2006) however found that an overwhelming majority of students in the U.S.A. think that the grade they receive is all that really matters. This suggests that the achieved grade is perhaps the goal or end-result that they seek. The majority (96) of the participants in Haynie's study indicated strong preference for handouts that follow along with the lecture material presented, and that the handouts be as brief as possible. Observation shows that there are also some lecturers in Nigerian universities who emphasize that the accurate information on their courses can only be obtained through their lectures and notes made during the lectures. Many undergraduates therefore may strive to make desirable grades by depending on the lecture notes.

Nigerian undergraduates are achievement-oriented in a direction of the kind of society they live. The status of someone in contemporary Nigerian society seems to be related to the individual's class of certificate, but such status is usually difficult to sustain without adequate knowledge that back it up. A student therefore needs to strive to attain the best results and knowledge from the university. Are there, therefore, sets of students who use the library to seek knowledge more than others?

The university system is structured into subject disciplines based on subject matter and approach to study. In Nigeria as well as many other countries, Departments offering courses in similar subject disciplines are usually organised into physically-bound contiguous spaces called Faculty in the university campus. For instance, the Faculty of Arts in many of the universities comprise Departments that offer Courses related to human knowledge and skills in cultural arts such as in Music, Mass Communication, Theatre Arts, Fine and Applied Arts, Linguistics, etc.; and Faculty of Social Sciences usually comprise Departments that offer Courses that seek to apply the scientific method to explain human behaviour and social relationships such as in Economics, Geography, Sociology, Anthropology, Political Science, Psychology, etc. The approach to use of the library among such subject disciplines might differ. For instance, laboratory inclined subject disciplines such as Pharmaceutical Sciences, seem, more than Social Sciences, to require specific information and procedure on how problems could be solved, and this might influence their use of the library. Discipline related differences in library use have been reported for scholars and professionals (Kidd, 2002; Tenner & Yang, 1999). Whitemire (2002) also reported significant differences in the use of the library among undergraduates in the United States of America based on subject discipline; for instance, undergraduates in the life sciences made higher use of the electronic resources of the library than their colleagues in Engineering discipline. Research on subject discipline differences in use of the library in Nigerian universities is lacking. Part of the objectives of the current study therefore was to determine if there were subject discipline differences in use of the library among Nigerian undergraduates. It was hypothesized that there would be significant subject discipline differences in use of the library among Nigerian undergraduates.

In contemporary Nigerian education system, the typical undergraduate is admitted into the undergraduate programme around age 17-19 years and completes it around age 23-26 years, considering Courses that take longer period, such as Medicine. Those who are engaged in the undergraduate programme beyond age 26 years are assumed in this study to be beyond the normal age range of the typical young undergraduate.

The younger people admitted into the university are likely to be curious individuals who search for information. They might therefore not only read their lecture materials but also read other materials in the library that could fulfil their information need. The older students may be working in organizations or government ministries and might just be in search of a university certificate to enhance the chances of their promotion in their place of work. Most of such students would be doing other things that compete with studying. Some are business executives and hardly would have the time to visit the library; some would alternate between their studies and work; some might just see themselves as executive students and rarely attend lectures. Tenopir's (2003) review shows conflicting

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findings on the relation between age and use of the library, with some of the studies showing that use of the library was higher among younger persons than older persons while other studies reported no difference. A clarification of the relation of age to use of the library is therefore needed. It was hypothesized in this study that younger undergraduates would report higher use of the library than older undergraduates.

It is also probable that male students differ from female students in the use of the library. Although a few studies such as Finholt and Brooks (1999) indicate that men make higher use of the library than women, there is no clear trend in the literature on gender differences in use of the library (Tenopir, 2003). Considering that similar academic demands are usually made on both male and female undergraduates, the present researchers hypothesized that there would be no significant gender difference in use of the library among undergraduates. The findings of the present study may contribute to clarification on individual differences in use of the library.

Method

Participants

Participants were 362 undergraduates from six randomly selected subject disciplines in four universities in eastern Nigeria who have completed at least one year in their degree programmes. They volunteered to take part in the study when they were approached in group in their departmental classrooms and verbally requested to accept to complete a questionnaire on their use of the library: 68 were from subject disciplines of Arts, 73 from Education, 64 from Law, 63 from Social Sciences, 63 from Pharmaceutical Sciences, and 31 from Veterinary Medicine. They comprised a total of 163 men and 199 women. Those aged 18-26 years were categorized as-younger ($n = 262$), while those aged 27-32 years were categorized as older ($n = 100$), based on the consideration that in contemporary Nigerian education system, the typical young undergraduate completes the programme before age 27 years. The mean age of the participants was 25 years.

Instrument

The instrument used to measure participants' use of the library was a 16- item Library Utilization Questionnaire developed by the researchers. The instrument's face validity was determined by 12 lecturers in the Departments of Psychology and Public Administration. Reliability analysis (data from 102 undergraduates from Physical Sciences in one of the universities involved in the study) showed an internal consistency reliability estimate of Cronbach's Alpha. 78. Example of items in the questionnaire is, "Do you visit the library up to three times in a week?" Responses are either "Yes", scored 1; or "No", scored 0. Scores on all the items are added up to obtain a use of the library score. A participant could obtain a use of the library score between 0 and 16, with higher score indicating higher use of the library. Provision was also made in the questionnaire for participant's discipline, age and gender.

Procedure

One of the researchers visited the participants in their lecture classrooms, introduced himself and the purpose of the study, and thereafter administered the questionnaire to the students who accepted to participate in the study after establishing adequate rapport. Copies of the questionnaire were completed and returned to the researcher immediately.

Design and Statistics

The design of the study was multi-group cross sectional survey design. Analysis of variance (ANOVA) (SPSS 10 program) was used for analysis.

Results

The mean scores of the groups of participants on use of the library are shown in Table 1 while a summary of a three-way ANOVA on the data is shown in Table 2. Figure 1 explains the observed significant interaction effect of the independent variables (discipline and age) on use of the library.

Table 1

Mean Scores of Student Groups in Use of the Library

Factor	Group	M	SD	N
Discipline	Arts	10.31	3.32	68
	Education	10.00	3.32	73
	Law	10.67	3.25	64
	Pharmaceutical Sciences	9.73	3.14	63
	Social Sciences	9.92	3.74	63
	Veterinary Medicine	11.32	3.25	31
Age	Younger	10.23	3.36	262
	Older	10.24	3.36	100
Gender	Men	10.15	2.99	163
	Women	10.29	3.64	199

Table 1 shows that undergraduates of Veterinary Medicine reported the highest use of the library (M = 11.32, SD = 3.25), whereas those in Pharmaceutical Sciences and Social Sciences reported the lowest use of the library (M= 9.73, SD = 3.14; M= 9.92, SD = 3.74, respectively). Men and women obtained similar mean scores on use of the library. The same applied to the age groups. ANOVA was conducted on the means to determine if the differences were significant.

Table 2

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ANOVA Summary on Subject Discipline, Age and Gender Differences in Use of the Library

Source	Sum of Squares	df	Mean Square	F	eta Squared
Discipline	88.35	5	17.67	1.62 [#]	.02
Age	3.22	1	3.22	0.30 [#]	.001
Gender	0.95	1	0.95	0.09 [#]	.0003
Discipline * Age	142.28	5	28.46	2.61 [*]	.04
Discipline * Gender	73.28	5	14.66	1.35 [#]	.02
Age * Gender	12.21	1	12.21	1.12 [#]	.003
Discipline * Age * Gender	57.47	5	11.49	1.06 [#]	.02
Error	3681.80	338	10.89		
Total	4071.97	361			

^{*}: $p = .025$ ($p < .05$); [#]: not significant ($p > .05$)

Table 2 shows that the participants did not differ significantly in use of the library on the basis of subject discipline, $F(5, 338) = 1.62, p = .15$; age, $F(1, 338) = 0.30, p = .59$; or gender, $F(1, 338) = 0.09, p = .77$. The effect size (eta squared) of these variables on use of the library ranged from small to negligible: .02, .001, and .0003 for discipline, age and gender, respectively. There was however a significant interaction effect of subject discipline and age on use of the library: $F(5, 338) = 2.61, p = .03$; although the effect size was relatively small (.04). Figure 1 below illustrates the subject discipline and age interaction effect on use of the library.

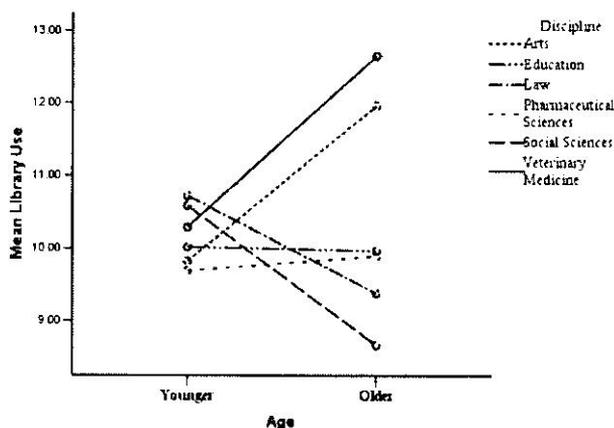


Figure 1: Interaction Effect of Subject Discipline and Age on Use of the Library

The Figure shows that younger undergraduates in the various subject disciplines reported similar degrees of use of the library. There was however a wide disparity in use of the

library among older undergraduates in the various subject disciplines. Whereas use of the library increased with older age among undergraduates in subject disciplines of Veterinary Medicine (Younger: $M = 10.60$, $SD = 3.28$; Older: $M = 12.64$, $SD = 2.87$) and Arts (Younger: $M = 9.76$, $SD = 3.42$; Older: $M = 11.94$, $SD = 2.49$), use of the library decreased with older age among undergraduates in subject disciplines of Law (Younger: $M = 10.92$, $SD = 3.34$; Older: $M = 9.58$, $SD = 2.68$) and the Social Sciences (Younger: $M = 10.47$, $SD = 3.94$; Older: $M = 8.75$, $SD = 3.02$). Use of the library was approximately stable across age for undergraduates in Education and Pharmaceutical Sciences. Among all the groups of undergraduates, older undergraduates of Social Sciences reported the lowest use of the library ($M = 8.75$, $SD = 3.02$). Fisher's Protected Least Significant Difference (LSD) post hoc test, for instance, showed that older Law and Social Sciences undergraduates significantly made less use of the library than older undergraduates in Veterinary Medicine ($p = .03$, and $p = .002$, respectively).

Discussion

The results show that there was no significant difference among undergraduates in Nigerian universities on use of the library when subject discipline, age or gender is considered as the critical variable alone. This finding refutes the first and second hypothesis of this study but upholds the third hypothesis, which however expected no significant gender differences in use of the library. The result on discipline difference in use of the library is contradictory to Whitemire's (2002) finding of discipline difference in use of the library. This contradiction with Whitemire's finding may however be due to the difference between the present study and that of Whitemire in the specificity of behaviour measured: whereas Whitemire (2002) focused on use of specific resources of the library, the present study gave consideration to a general, all-purpose use of the library.

The results tends to imply that most undergraduates in Nigerian universities value and engage in library use almost at the same degree and do not differ in this behaviour on the basis of subject discipline, age or gender. The need to use the library and acquire knowledge or graduate with desirable grades or class of degree, in line with the expectancy value theory (Raynor et al., 1982), would on cursory observation seem to apply evenly among undergraduates in the different subject disciplines, age groups and gender groups in Nigerian universities. However, a consideration of the significant interaction effect between subject discipline and age on use of the library shows that there were indeed significant differences in use of the library among the undergraduates. Whereas Nigerian undergraduates' striving for acquisition of knowledge through the use of the library seems not to be critically determined by subject discipline, age or gender when each of them is considered in isolation, the results of this study show that older students in the subject disciplines of Law and Social Sciences made less use of the library than their younger counterparts in the same subject discipline.

The increased use of the library by older undergraduates in Arts and Veterinary Medicine is expected, and may be attributed to increasing goal achievement behaviour (Raynor et al., 1982) in career as one gets closer to a period when they would be required to demonstrate competence in occupational skill by society. A different process seems to be

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applying to older undergraduates in Law and Social Sciences, who reported decreased use of the library at older age. This observation may be explained on the basis that the nature of demands made by the subject disciplines of Law and Social Sciences in Nigerian universities may differ from those of the other subject disciplines, and would therefore reflect in use of the library among the undergraduates. If people perceive the rigours of scholarship demanded by courses in Law and Social Sciences as less exacting, then it is probable that older persons that are admitted into these subject disciplines, when they may have already been engaged in some kind of occupation, would approach their undergraduate programme with low vigour in intellectual expectancy value. They would make less use of the library than younger undergraduates if their goal is just to acquire the certificate for promotion in their workplace or for social status elevation. Thus the degree awarded becomes almost a status symbol for them, and not accompanied by adequate knowledge or skill. A different process may apply to younger undergraduates, who may use the library more often while engaged in the programme as a means for acquiring not only good grades and a desirable class of degree in order to be able to secure competitive job with them, but also to obtain adequate knowledge and skills that will enable them to cope with the anticipated demands of the future jobs.

The social status implications of courses in Law and Social Sciences also may seem more conspicuous to the certificate-seeker than may be attributed to courses in the other subject disciplines. Courses in the other subject disciplines seem to be core-knowledge and skill based. Many aged candidates who seek admission into the university for personal or social status advancement rather than for reasons related to core-knowledge may prefer Law and Social Sciences to such disciplines as Veterinary Medicine which may be too rigorous and too demanding for them, or Arts which are less social trendy in Nigeria when compared to Law and Social Sciences; and this may also explain the higher proclivity of admissions into the Social Sciences in Nigerian universities (e.g., University of Nigeria, 2002). Such people include civil servants, politicians and businesspersons. Such older students would use minimal library resource and make minimal personal efforts to pass the courses. The quality of the grades and class of degree they obtain may not matter much to them. This is less likely to obtain with younger students, who might be motivated to acquire a strong and adequate knowledge base and competence for future employment and to ensure career success.

It may be inferred from this study that younger undergraduates in Law and Social Sciences seem to visit the library to fulfil their information need; the older students seem to have other preferred needs to attend to and therefore have little time to spend visiting the library. They are therefore likely to depend more on lecture notes that are sometimes copied from classmates.

The findings of this study indicate that a significant Proportion of older undergraduates in Law and the Social Sciences subject disciplines in Nigerian universities do not seem to make enough use of the library in their programmes. Their motives for seeking admission into the undergraduate programmes may not be knowledge related, as seems to apply to younger undergraduates. The universities may need to add in their admission requirements items to assess why the candidate is applying for a course.

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